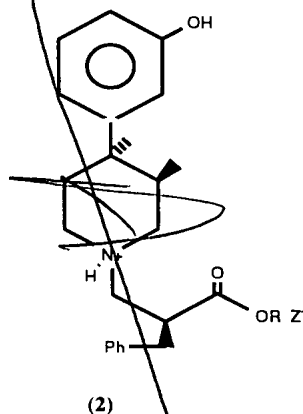


We Claim:

1. Crystalline compounds of the Formula 2

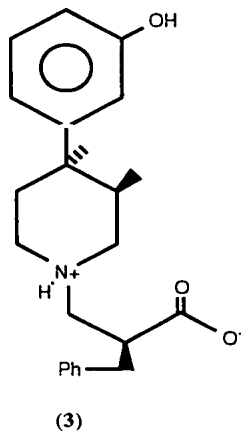


ex. 4

wherein R is C<sub>1</sub>-C<sub>6</sub> alkyl; Z<sup>-</sup> is selected from the group consisting of hydrochloride, hydrobromide, succinate, and (+)-dibenzoyltartrate.

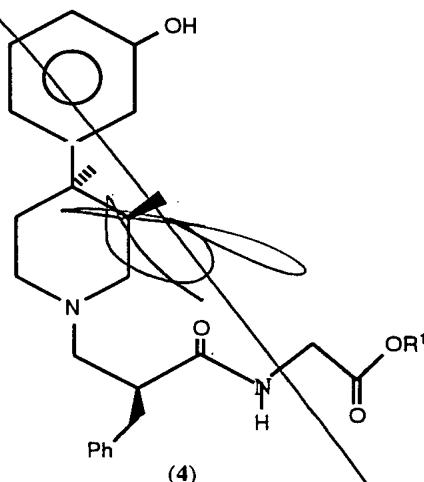
2. The compound of **Claim 1** wherein Z<sup>-</sup> is hydrochloride and R is methyl.

17 3. A process for preparing a crystalline monohydrate compound of Formula 3



comprising the crystallization of 3 from a solvent comprised of about 50% ~~lower alcohol~~ <sup>methanol</sup> and about 50% ~~to 25%~~ water (by weight).

4. A crystalline compound of the Formula 4



ex 13

wherein R<sup>1</sup> is C<sub>1</sub>-C<sub>6</sub> alkyl; the compound is a salt selected from the group consisting of hydrochloride acetone monosolvate, malate (1:1), and sesquimalate (3:2).

4. A crystalline compound of **Claim 4** wherein the compound of Formula 4 is (2S,3R,4R)[[2-[[4-(3-hydroxyphenyl)-3,4-dimethyl-1-piperidinyl]methyl]-1-oxo-3-phenylpropyl]amino]acetic acid 2-methylpropyl ester.

5. A crystalline compound of **Claim 4** wherein the salt is the hydrochloride acetone monosolvate.

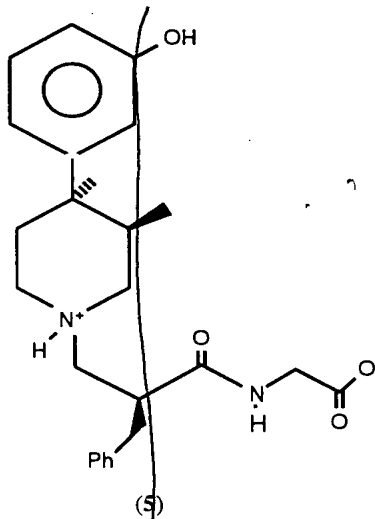
6. A crystalline compound of **Claim 6** wherein the compound is (2S,3R,4R)[[2-[[4-(3-hydroxyphenyl)-3,4-dimethyl-1-piperidinyl]methyl]-1-oxo-3-phenylpropyl]-amino]acetic acid 2-methylpropyl ester hydrochloride acetone monosolvate.

7. A crystalline compound of **Claim 4** wherein the salt is sesquimalate.

8. A crystalline compound of **Claim 8** wherein the compound is (2S,3R,4R)[[2-[[4-(3-hydroxyphenyl)-3,4-dimethyl-1-piperidinyl]methyl]-1-oxo-3-phenylpropyl]-amino]acetic acid 2-methylpropyl ester.

9. A crystalline compound of **Claim 4** wherein the compound is (2S,3R,4R)[[2-[[4-(3-hydroxyphenyl)-3,4-dimethyl-1-piperidinyl]methyl]-1-oxo-3-phenylpropyl]-amino]acetic acid 2-methylpropyl ester malate.

8 ~~11~~. A crystalline dihydrate compound of the Formula 5



9 ~~12~~. A compound of **Claim 11**<sup>8</sup> wherein the crystalline dihydrate compound is at least 97% (2S,3R,4R)dihydrate.

10 ~~13~~. A method for binding a peripheral opioid receptor in a patient which comprises administering to said patient an effective amount of a compound of **Claim 4**<sup>1</sup>.

11 ~~14~~. A method for binding a peripheral opioid receptor in a patient which comprises administering to said patient an effective amount of a compound of **Claim 11**<sup>8</sup>.

15 ~~15~~. A method for treating a condition selected from the group consisting of irritable bowel syndrome, idiopathic constipation, and non-ulcer dyspepsia; comprising administering an effective amount of a compound of **Claim 4**<sup>1</sup>.

20 ~~16~~. A method for treating a condition selected from the group consisting of irritable bowel syndrome, idiopathic constipation, and non-ulcer dyspepsia; comprising administering an effective amount of a compound of **Claim 11**<sup>8</sup>.

25 ~~17~~. A pharmaceutical formulation comprising an effective amount of a compound of **Claim 4**<sup>1</sup> in combination with one or more pharmaceutically acceptable excipients.

15 18. A pharmaceutical formulation comprising an effective amount of a compound of ~~Claim 11~~<sup>18</sup> in combination with one or more pharmaceutically acceptable excipients.

5 16 19. A formulation of ~~Claim 18~~<sup>15</sup> wherein the formulation is a hard gelatin capsule.

add  
B2